

I. Lake Background

- A. Lake name PETERSON Location 18 miles north of Juneau
B. Surface acreage 52.2 acres
C. Volume (acre feet) 877 acre feet
D. Inlets (number, size, and description) 1 major, 2 minor. Estimated total flow 150 cfs, drainage area 5.8 square miles.
E. Outlets (number, size, and description) 1 only, 150 cfs, 5 miles to saltwater, many barriers.
F. Estimated time in days to effect a complete water change. 30 days
G. Description of shoreline, swamps, bogs, shallow areas, underwater springs, submerged or emergent vegetation, or any other feature which might interfere with the application or distribution of toxicant. 10% of lake has emergent vegetation, south end of lake ends in bog and muskeg, many potholes in upper drainage area.

II. Pretreatment Data

- A. Volumetric map showing depth contours, number of depth readings (if applicable), and description of method used to determine volume.

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- B. Trash species to be removed. Dolly Varden

III. Treatment Data

- A. Date 6/16/61?
- B. Toxicant used Rotenone
1. Total gallons of liquid used 25 gallons
 2. Concentration of liquid (percent) 5%
 3. Total pounds of powder used 1,500 pounds
 4. Concentration of powder (percent) 5%
- C. Level of concentration in lake (ppm) 5 ppm
- D. Method of application Backpack pumps and towing in motor wash
- E. Temperature profile (graph on reverse side) Maximum surface temperature 60°
- F. Water chemistry: pH 6.7 Methyl orange alkalinity 11 ppm Total alkalinity 11 ppm Total dissolved solids 31 ppm

IV. Post Treatment Data

- A. Duration of toxicity or date last is determined to be non-toxic 31 days
- B. Method of determination live box test
- C. Success of kill 90%
- D. Method of determination test netting
- E. Comments Dolly Varden completely removed from lake, but not from surrounding muskeg watershed. Dolly Varden fry from the muskeg re-entered the lake and comprised 50% of the population in 1964. The planted steelhead exhibit a better growth rate, however. It is believed that the only way to achieve a complete kill in this situation would be to spray the watershed by helicopter. Another possibility would be to hold the lake out of production for two years and have a subsequent reclamation when the rearing Dolly Varden fry leave the watershed and enter the lake.